CLAIMS

1. An induction heating cooking device comprising:

an inverter including:

a series circuit of a first switching element and a second switching element that are connected to ends of a smoothing capacitor;

a first diode connected to the first switching element in anti-parallel;

a second diode connected to the second switching element in anti-parallel; and

a resonant circuit that has a heating coil and a resonant capacitor, and is connected to one of the first switching element and the second switching element in parallel; and

a heating output control part that alternately drives the first switching element and the second switching element, and controls a heating output used when the heating coil induction-heats a load,

wherein

the heating output control part sets driving frequency of the first switching element and the second switching element to be substantially 1/n (where, n is an integer of 2 or more) times higher than resonance frequency of the resonant circuit in heating the load, and

the heating output control part changes and controls driving duty defined by rates of a driving period of the first switching element and a driving period of the second switching element so that the driving period of the first switching element and the driving period of the second switching element are inverted in length and substantially the same heating output is obtained.

2. The induction heating cooking device according to claim 1,

wherein the heating output control part controls the driving duty so that the driving period of the first switching element and the driving period of the second switching element are inverted in length and substantially the same heating output is obtained, by changing the driving duty from substantially (2k−1)/2n (where, k is any integer of 1 to n) to substantially 1−((2k−1)/2n) (where, k is any integer of 1 to n).

3. The induction heating cooking device according to claim 1,

wherein the heating output control part controls the heating output of the heating coil by controlling the driving frequency of the switching element.

4. The induction heating cooking device according to claim 1,

wherein the heating output control part controls the heating output of the heating coil by controlling voltage fed into the inverter.

5. The induction heating cooking device according to claim 1 further comprising:

a switching element temperature detecting part for detecting temperature of the switching element,

wherein the heating output control part, based on a detection output of the switching element temperature detecting part, changes the driving duty so that the driving periods of the first switching element and the second switching element are inverted in length and substantially the same heating output is obtained.

6. The induction heating cooking device according to claim 1,

wherein the load is made of nonmagnetic metal with low resistivity.